

purposes. The various advantages of this process are obvious. As a means of interesting both young and old in becoming acquainted with the trees of their neighborhood this method has no equal and need not be dwelt upon in the present connection. As an aid to paleobotanical work it is also extremely useful. It is not necessary to dry the leaves as fresh ones answer equally well, although dried leaves from the herbarium give equally good prints if they are reasonably flat and not too brittle. The prints show both surfaces as the result of a single operation and the varying appearance of the vascular system on the two surfaces is especially valuable for comparison with fossil leaf impressions. From fifty to one hundred can be made within an hour and with a little practise the results are uniformly excellent. The accompanying illustrations are chosen to show this feature although these particular prints are much less artistic than dozens of other leaf species which might have been selected. The upper figures show the upper and under print of a leaf of *Quercus Chapmani* while the lower figures show the corresponding surfaces of a leaf of *Quercus myrtifolia*, both oaks of our extreme southern states.

JOHNS HOPKINS UNIVERSITY,
BALTIMORE, MARYLAND.

A NEW PLUM FROM THE LAKE REGION OF FLORIDA

BY ROLAND M. HARPER

The lake region of Florida,* which was scarcely known to botanists before the researches of Mr. George V. Nash in 1894,† has yielded a rich harvest of plants new to science, probably at least 75 species, about half of which are not at present known outside of this region. By far the greater number of these were discovered in the central part of Lake County by Mr. Nash in the year named, and many of them were described by him.

*The boundaries and most striking characteristics of this region have been indicated by the writer in Ann. Rep. Fla. Geol. Surv. 3: 223-224. pl. 16. 1911.

†See Bull. Torrey Club 22: 141-161. 1895.

During the present century very little collecting has been done in this region, but its botanical possibilities are by no means exhausted.

In the southern part of Lake County, especially just west of Lake Apopka, is an area of several square miles characterized by high sandy hills, sometimes known as mountains,* which Mr. Nash never saw. Like most other parts of the lake region, this area is dotted with small lakes, and contains no streams or valleys, and rocks are conspicuous by their absence. The hills under consideration differ from other hills of the region chiefly in being higher and steeper, the summits of some of them being perhaps 150 feet above the lakes at their bases. They are believed by some people to be the highest elevations in Florida, but their altitudes above sea-level have probably never been accurately determined. The vegetation of these hills is uniformly of the "high pine land" type described by Mr. Nash in the paper cited, with the addition of a few species more characteristic of the "scrub," such as *Ceratiola* and *Selaginella*, and a few very local species such as *Polygala Lewtonii* and the shrub presently to be described. The forests have scarcely been touched by civilization, the greater part of them not even having experienced the ravages of the turpentine industry.

On Feb. 19, 1909, just before dark, I first saw these hills from a train on the Tavares & Gulf R. R., which winds about their bases close to Lake Apopka for several miles, and is probably the crookedest railroad in Florida. The next day I walked southward on this railroad from Tavares, the county-seat of Lake County, and reached the northern edge of the hills about ten miles from Tavares and five or six from West Apopka. Almost immediately upon entering the hill country my attention was attracted to some low diffusely branched plum bushes, some of them in full bloom and leafless, and others a little more advanced, with very young leaves and fruit. The bushes were not more than two feet tall, on the average, and about the same in diameter, with branches exceedingly numerous, decidedly

*The most comprehensive description of these hills that I know of, and the one which first called my attention to them, is in Tenth Census U. S. 6: 237. 1884.

zigzag — somewhat as in *Malapoenna geniculata* — and inclined to be spinescent, as in several other species of plums. The flowers were a centimeter or less in diameter, very short-pedicelled, and arranged in few-flowered sessile umbels, much like those of *Prunus angustifolia*.

At this time I had no collecting apparatus with me, and was not going to be back in Tavares for several hours, so that there was no way of preserving any specimens which would be recognizable; and nearly two months elapsed before I had another opportunity to visit this interesting region. On the morning of April 17 I approached the same group of hills from the southwest side, leaving the same railroad at Minneola; and on some of the highest hills about half way between Minneola and West Apopka (which are about four miles apart in a straight line and ten miles by rail) I found my new plum again in abundance. (I had had glimpses of it two days before from a train between Killarney and Minneola.) The leaves were of course full-grown by this time, and the largest had blades about 2.5 cm. long and petioles about a third of that length. Some were very much smaller, but the average dimensions were probably about three-fourths of the maximum. All were oblong, about twice as long as wide, minutely mucronate at the apex, with finely crenate-serrate margins, and most of them were aggregated on very short peg-like branchlets in the manner of many other woody plants of the Rosaceae and allied families. The drupes, although still green, must have been full-grown or very nearly so, and they were practically indistinguishable from those of *Prunus angustifolia* at the same season. They were about 22 mm. long and 18 mm. in diameter, on stout pedicels about 3 mm. long.

At this time I photographed one of the largest bushes, which was about four feet tall and well loaded with fruit, and made several herbarium specimens from it. Wishing to ascertain the size, color, taste, etc., of the ripe fruit, I revisited the place on the twentieth of the following month, but was too late for it that season. A diligent search failed to reveal a single fruit or even a shriveled remnant of one, not even on the same bush which had furnished my specimens a few weeks before. On May

18, 1910, I came across several specimens of the same plant on somewhat similar high sandy hills about 35 miles farther south, near Haines City, Polk County, but was again too late for fruit.

This peculiar little *Prunus* seems to have its nearest relative—in the eastern United States at least—in *P. angustifolia* Marsh. (*P. Chicasa* Mx.), a large shrub or small tree whose favorite habitat is old fields and fence-rows in regions where agriculture has been practiced for a generation or two at least. The native home of *P. angustifolia*, if it has any, is not definitely known, but is supposed to be somewhere west of the Mississippi River.* The new species differs from *P. angustifolia* in being much smaller in almost every way except its fruit, in its diffuse habit and crooked branches, its short pedicels, and especially in being confined to a very limited area of very poor soil, which may not be cultivated for several decades to come.

The description given above, although incomplete in several particulars, and not arranged in conventional order, will be amply sufficient to enable any one to recognize the plant in the field. Several more seasons may elapse before I have a chance to collect flowers and ripe fruit, and it seems best to give the plant a name without further delay, so that it can be mentioned in descriptions of Florida vegetation. I therefore propose to call it ***Prunus geniculata***. Specimens collected at the time and place above mentioned have been distributed as no. 31 of my Florida plants, and have been pronounced undescribed by all systematists who have examined them.

I have recently been informed that there is in the Gray Herbarium a flowering specimen of the same species, collected in March, 1889, by Otto Vesterlund near Killarney, which is on the southwest side of Lake Apopka, where the Tavares & Gulf R. R. crosses the "Orange Belt" division of the Atlantic Coast Line, a few miles southeast of West Apopka.

*For notes on its supposed origin, present habitat, etc., see Michaux, Fl. Bor. Am. 1: 284-285. 1803; Pursh, Fl. Am. Sept. 332. 1814; Nuttall, Genera 1: 302. 1818; Elliott, Bot. S. C. & Ga. 1: 542. 1821; Sargent, Tenth Census U. S. 9: 66. 1884; Silva N. A. 4: 25-26. 1892; Mohr, Contr. U. S. Nat. Herb. 6: 551. 1901; Harper, Ann. N. Y. Acad. Sci. 17: 115, 228. 1906; Bull. Torrey Club 35: 350. 1908.